April 3, 2002

MODIS sensor Working Group (MsWG) Summary

Attendance: Farida Adimi, Suraiya Ahmad, Bill Barnes, Bob Barnes, Vincent Chiang, Wayne Esaias, Bob Evans, Vince Salomonson, Junqiang Sun, Gary Toller, Aisheng Wu, Jack Xiong, Joe Esposito

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Scheduled Items

Item 1. Aqua MODIS Status

BB) Call from Roger Drake. There is a box with gold thermal insulation near the SD door, which is in the exclusion zone. TRW confirms that reflections from the box may enter the cavity. They are working on repairing this issue.
Launch on April 26, 2002 at 02:55
New upload patches that prevent formatter resetting can be burned into the on-board E-prom. Since an on-orbit E-prom burn has never been done, a meeting is scheduled to okay this.

Item 2. Terra MODIS Safe Mode Recovery
Current Status

BB) (responding to question from Vince) The detector state may have changed after the reset and could impact Miami (striping).

JX) (responding to question Wayne on Direct Broadcast) The pattern has changed differently than we have seen previously. The DAAC does not need to send L1B v4.0.0 to direct broadcasting since all the changes are not on. In the current LUT tables only band 3 has been updated.

BB) The DAAC can use the present software with switches off.

JX) The new v4.0.0 m1 LUT has been calculated using the best BRF and vignetting function.
ACTION: New v4.0.0 LUTs will be sent to the DAAC. The DAAC can then send them to the direct broadcast community.

JX) MODIS is on Aside
MCST has received the full calibration data for the NAD open and data from NAD closed with SD screen open, but has not received data for the NAD closed, SD screen closed configuration.

Results from SD calibration (m1 and SNR)

JX) From the m1 trending the m1 values seem to be very close to the values before the S/C safe mode (event). All differences are less than 0.5% using the NAD open SD calibration data.
The SNR of all Bands/Detectors perform reasonably well. No major difference from before the reset. The pre-launch data in the plot is historical and reflect spectral dependency of the SIS non-uniformity.

Results from BB calibration (b1 and NEdT)

JX) MCST has looked at single scan b1 before and after data. B30 ch8 (product order) and B28 ch3 (product order) each are much noisier and have larger NedT. Both of the channels are known to be out-of-family and noisy previously. The gain of the TEB is basically the same.
Thermal band averages over random granules before and after results implies stability.

Other features under investigation (nadir door scanning, comparison of m1_closed and m1_open, mirror side correlated noise)

JX) There are some mirror side correlated noise (MSCN) issues to be studied.
There is no need at present to update the RSB tables
May want to update B21
Need to discuss with ST about the mirror side reversal offset (TEB) and new RVS.
MCST will be able to compare Ocean bands for open/closed NAD when the data arrives.

WE) Both ocean color and SST will have changed. Can the RVS be used to repair this?

JX) RVS + offset can be done but care must be taken. Current shape from EV data has changed.

BB) This is what BG called MSCN. The first time the reset occurred we had to upload a table. Upon future reset, the formatter will not turn off. Changes should not happen again.

Around the Table

Participant: Wayne Esaias – On schedule for reprocessing. What should MODAPS use in the forward processing (current/new LUTs)?

BE) We haven't seen the new tables but are not clear about their impact.

JX) MCST preformed tests with both the current and new tables on data from before the reset.

WE) It is possibly better to have MODAPS use the new LUTs.

JX) The effect will be primarily on B8-10 (flattening of m1) and on B17 (BRF update). A notice should be put on the website that user be cautious after the reset.

Participant: Gary Toller – Delivered L1B. MCST now maintains separate Aqua and Terra versions of both the L1B code and the LUTs

JX) MCST can test the data on first NAD light to check the L1B code and LUTs. Both Terra and Aqua at the same geo-location can be used to confirm the response with the Aqua LUT.

Participant: Suraiya Ahmad – We (DAAC) have not received the closed NAD, closed SDS data for 2002087 from EDOS.